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Amendments to the claims

This listing of claims will replace all prior versions and listings, of claims in the application:

Listing of Claims:

- 1. (Currently amended) An improved electrolyte and anode for the electrolysis of alumina (Al₂O₅), the electrolyte comprising a mixture of aluminum fluoride (AlF₃) and potassium fluoride (KF), and NaF comprises no more than 2 weight percent of the electrolyte, the anode comprises aluminum-bronze, and the anode contacts the electrolyte.
- 2. (Currently Amended) The electrolyte recited in claim 1 wherein the potassium fluoride (KF) to aluminum fluoride (AlF₅) molar ratio ranges from about 1.0 to 1.5.
- 3. (Currently Amended) The electrolyte <u>anode</u> recited in claim 1, the electrolyte further comprising wherein the anode comprises from 1 weight percent to 20 weight percent aluminum. from about 4 to 6 wt. % of aluminum oxide (alumina/Al₂O₃).
- 4. (Currently Amended) The electrolyte as recited in claim 1 wherein the concentrations of the electrolyte components remain relatively constant between 600 °C and 1000 °C. during hydrolysis
 - 5. (Cancel)
- 6. (Currently Amended) The electrolyte as recited in claim 3 wherein the electrolyte remains is a liquid between 600 and 1000 °C. during electrolysis.

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Claims 7-20 (Canceled)

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- An electrolyte-anode combination for use in aluminum electrolysis, the 21. (New) combination comprising:
 - a) an electrolyte comprising aluminum fluoride and potassium fluoride having a weight percent of less than 2 percent of NaF; and
 - b) an anode comprised of aluminum-bronze, wherein the anode contacts the electrolyte.
- The combination as recited in claim 21 wherein the electrolyte comprises 22. (New) aluminum fluoride, potassium fluoride, and contains dissolved alumina.
- 23. (New) The combination as recited in claim 21 wherein the anode is further comprised of from 1 weight percent to 20 weight percent aluminum.
- 24. (New) The combination as recited in claim 21 wherein an oxide film overlays the anode. oran ingiton comprisa
- The combination as recited in claim 21 wherein the anode has a polarization 25. (New) voltage of less than 0.5 volts at a current surface density of 0.8 amperes per square centimeter.
- The combination as recited in claim 24 wherein the film overlays the anode at a 26. (New) temperature of 660 °C. n in a sam frienda e vi

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